Work Order ID 73017

Thursday, September 01, 2011 1:25:57 PM

Item ID: D3391-025 **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Aft Tube Assembly

Start Date: 8/23/2011 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 9/9/2011 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** MF **Date:** 11-09-01 **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Draw Nbr	Revision Nbr
D3391	Rev H/ DEO

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
100	MORI SEIKI CNC LATHE LARGE	0.00							
Mori Seiki	Memo	0.00							
Mori Seiki CNC Lathe Large	Turn as per Folio FA599 Rev: ____ & Dwg D3391 Rev: ____					1	Ø		
	scribe batch # on fwd end at 90 degree					mm.c 11/09/1			
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
QC	Memo	0.00				1	Ø		
Quality Control						mm.c 11/09/01			
111	QC8- Inspect parts - second check	0.00							
QC	Memo	0.00				1			
Quality Control									

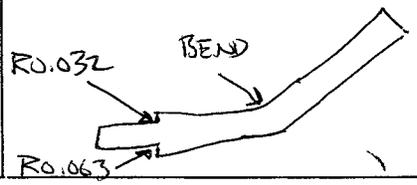
RA 11.9.13

Dart Aerospace Ltd

W/O: 73017	WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3391-025 **PAR #:** N/A **Fault Category:** Machining **NCR:** (Yes) No **DQA:** [illegible] **Date:** 11.11.03

11-956 **Resolution:** use-as-is **Disposition:** use-as-is **QA: N/C Closed:** [illegible] **Date:** 11/11/04

NCR:	WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B: Initial Chief Eng	Action Description Chief Eng	Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector
11.09.16	100	FLAT ON ONE SIDE 0.100" TOO LONG. DIM 31.750" ORIGIN NOT SET CORRECTLY. ~~TRANSITION RAD. IS 1/8 INSTEAD OF 1/16~~	[illegible] 11.09.16 QS042	ACCEPTABLE BASED ON D.S. EMAIL ATTACHED	B.A 11/09/16	JL 11-09-19	[illegible] 11.09.16 QS042	[illegible] 11/11/01
11.09.16	100	RADIUS R0.063 IS R0.032. RC: LOA ~~[illegible]~~	[illegible] 11.09.16 QS042	Acceptable. TAG TUBE SO ~~BEND~~ SMALL RADIUS IS ON TOP OF TUBE WHEN BENT	B.A 11/09/16	SAD 11-10-12	[illegible] 11.09.16 QS042	[illegible] 11/11/01
								

NOTE: Date & initial all entries

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Work Order ID 73017

Thursday, September 01, 2011 1:25:57 PM

Item ID: D3391-025 **Accept** **Setup Start** **Stop**

Revision ID:

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Start Date: 8/23/2011 **Start Qty:** 1.00 **Cust Item ID:**

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Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	HAAS CNC VERTICAL MACHINING #1	0.00	B.A 11/09/15			1	ϕ		
HAAS 1	**Memo**	0.00							
HAAS CNC vertical machine #1	1-Machine as per Folio FA 599 Rev: AA & Dwg D3391 Rev: H 2-Deburr								
130	QC2- Inspect parts off machine FAI/FAIB	0.00	B.A 11/09/15			1	ϕ		
QC	**Memo**	0.00							
Quality Control									
140	QC8- Inspect parts - second check	0.00	JL 11-09-19			1			
QC	**Memo**	0.00							
Quality Control									

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID 73017

Thursday, September 01, 2011 1:25:58 PM

Item ID: D3391-025 **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Aft Tube Assembly

Start Date: 8/23/2011 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 9/9/2011 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Skidtubes	0.00							
Skidtubes	**Memo**	0.00							
Skidtubes	1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803								
160	BENDING MACHINE - SKIDTUBES	0.00							
CNC Bend 1	**Memo**	0.00							
CNC Delta 100 Bender	Form as per Dwg D3391 Using Bend Prog 3391025								
170	QC5- Inspect part completeness to step on W/O	0.00							
QC	**Memo**	0.00							
Quality Control									

DP 11-10-12

SEE W/O CHG. OVER. SAD 11-10-12 ①
PTO

1 0 BE 11/10/21

Dart Aerospace Ltd

W/O: 73017		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
11.09.16	160	ORIENT TUBE IN BENDER SO R0.032 RAD IS ON TOP OF TUBE AFTER BENDING SEE ENG (CP) FOR FURTHER REF	SAD	11-11-01	1	11.09.16	11/11/01
		R0.032 R0.063					

Part No: D3391-025 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID 73017

Thursday, September 01, 2011 1:25:58 PM

Item ID: D3391-025 **Accept** **Setup Start** **Stop**

Revision ID:

Item Name: Aft Tube Assembly

Start Date: 8/23/2011 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 9/9/2011 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180		0.00							
Skidtubes	Skidtubes								
Skidtubes	**Memo**	0.00							

1-Open Aft cap pilot hole to .208" as per Dwg D3391

2-Drill float bag holes using DT8809 as per Dwg D3391(Holes marked "A" Only.

3-Drill wearplate holes as per Dwg D3391 using DT8878(Mid Tube) & DT8217 Wearplate Jig
*****Do Not Open To Finished Size*****

DP 11-10-21

4-Drill Wearshoe holes as per DWG D3391 using DT8939 locating from 2 previously drilled aft wearplate holes.

5-Open wearplate holes to 0.250" and c'bore as per dwg D3391

6-Open up all wearshoe , wearplate to 0.297"and float bag holes to 0.328" as per Dwg D3391.

DP 11-10-24

7-Deburr

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

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Start Date: 8/23/2011 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 9/9/2011 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00				0	11·10·24		
Quality Control									
200	Chemical Conversion Coat per QSI005 4.1	0.00							
HandFinish	Memo	0.00				0	SAD 11-10-25		
Hand Finishing									
210	QC3- Inspect Part Finish	0.00							
QC	Memo	0.00				1	DD 11-10-25		
Quality Control									

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

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Item ID: D3391-025 **Accept** **Setup Start**

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Item Name: Aft Tube Assembly

Start Date: 8/23/2011 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 9/9/2011 **Req'd Qty:** 1.00 **Customer:**

Reference:

Run Start

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220	Skidtubes	0.00							
Skidtubes	**Memo**	0.00							
Skidtubes	Instal spacers as per dwg D3391 A/R Magnabond 6398 Batch: 117820 exp. date : 12-8-30 cure time 12hrs as per QSI0015								
230	QC5- Inspect part completeness to step on W/O	0.00							
QC	**Memo**	0.00							
Quality Control									
235	Pressure Wash per QSI005 4.3	0.00							
HandFinish	**Memo**	0.00							
Hand Finishing	AND REALODINE AS PER PAR09-043								

DP 11-10-25

S 11/10/27

HOM 11/10/27

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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NOTE: Date & initial all entries

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Start Date: 8/23/2011 **Start Qty:** 1.00 **Cust Item ID:**

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Reference:

Run Start

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Stop**

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
Powdercoat									
Powder Coating	**Memo**	0.00							
	START TIME: 10:00 OVEN TEMPERATURE: 320 0F FINISH TIME: 10:30								
250	QC3- Inspect Part Finish	0.00							
QC									
Quality Control	**Memo**	0.00							
260		0.00							
HandFinish	HandFinishing								
Hand Finishing	**Memo**	0.00							

M117745

1X ø M 11/10/31

1 X ø M 11/11/01

1 X ø M 11/11/01

1-Install inserts as per Dwg D3391
2-Install Aft Cap as per Dwg D3391
A/ R Sikaflex-241/-291 M119299
Sikaflex expiry date: 12/08

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

Work Order ID 73017

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Revision ID: **Stop**

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Reference:

Run Start **Stop**

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control							11	11	01 · (1)
280	Identify as per dwg & Stock Location: w10	0.00	D412-742-043 / 1375562						
Packaging	Memo	0.00				1x	ϕ	11	11/11/01
Packaging									
290	QC21- Final Inspection - Work Order Release	0.00							11/11/01
QC	Memo	0.00							
Quality Control									MF 11-11-01

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

Picklist Print

Thursday, September 01, 2011 1:25:52 PM

Work Order ID: 73017

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 8/23/2011 **Required Date:** 9/9/2011

Start Qty: 1.00 **Required Qty:** 1.00

Comments:

IPP Rev B 06-02-07 ECN773 dwg rev. D EC
IPP Rev:C 06-03-28 Update Manuf. Instructions JLM
IPP rev D 07.03.20 revF dwg EC
IPP rev E 07.11.07 rev G dwg ecn 1053p EC verified by: DD
IPP Rev:F 07-11-13 ECN 1056 DD verified by: EC
IPP Rev:G 08-09-10 revH as per dwg DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6014-090 ALUMINUM EXTRUSION		Manufactured	No			100	Each	31.0000	1	1			

Location	Loc Qty	Loc Code
LG	31	
56572	1	
66179	30	

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3670-4-200 SPACER		Manufactured	No			230	Each	152.0000	4	4			

Location	Loc Qty	Loc Code
LG	56	
70822	14	2
71850	42	2
LG001	96	
72851	96	

11-10-25

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

Picklist Print

Thursday, September 01, 2011 1:25:53 PM

Work Order ID: 73017

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 8/23/2011 **Required Date:** 9/9/2011

Start Qty: 1.00 **Required Qty:** 1.00

D2646	Manufactured	No	270	Each	92.0000	1	1	
Aft Cap								

Location		Loc Qty	Loc Code
FP004		45	
	68280	45	
FP006		5	
	62678	5	
FP-4		38	
	70945	1	
	71070	37	
fp5		4	
	71038	4	

D3537-1	Manufactured	No	270	Each	117.0000	1	1	
Wearpad								

Location		Loc Qty	Loc Code
FP001		60	
	72124	60	
FP016		50	B74597
	68944	0	
	70687	50	
FP017		7	
	69817	5	
	70686	2	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Work Order ID: 73017

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 8/23/2011 **Required Date:** 9/9/2011

Start Qty: 1.00 **Required Qty:** 1.00

D3537-7	Manufactured	No	270	Each	13.0000	1	1	
Wearpad								

Location	Loc Qty	Loc Code	
FP	5		
71689	5		
FP017	8		
71689	8		X1

D3553-1	Manufactured	No	270	Each	41.0000	1	1	
Gasket								

Location	Loc Qty	Loc Code	
FP013	41		
56568	2		
73155	39		X1

D3553-3	Manufactured	No	270	Each	26.0000	1	1	
Gasket								

Location	Loc Qty	Loc Code	
FP	20		
31631	20		
FP013	6		
53480	6		X1

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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Work Order ID: 73017

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 8/23/2011 **Required Date:** 9/9/2011

Start Qty: 1.00 **Required Qty:** 1.00

D3672-1	Manufactured	No	270	Each	1,178.000	2	2	
Phenolic Washer								

Location		Loc Qty	Loc Code	
ST074		1176		
	64177	180		
	66821	496		
	72229	500		X2
ST077		2		
	52505	2		

ALS4-1032-130	Purchased	No	260	Each	848.0000	14	14	
Insert ≠ ALS7-1032-130								

Location		Loc Qty	Loc Code	
ST281		370	xx 118 966	X14
	118386	370		
ST282		478		
	117717	54		
	118237	168		
	118312	256		

ALS4-1032-225	Purchased	No	270	Each	1,925.000	12	12	
Insert								

Location		Loc Qty	Loc Code	
ST282		1925		
	110768	62		
	117717	9		
	118386	860		
	118696	994		X12

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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Picklist Print

Thursday, September 01, 2011 1:25:53 PM

Work Order ID: 73017

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 8/23/2011 **Required Date:** 9/9/2011

Start Qty: 1.00 **Required Qty:** 1.00

AN3C4A BOLT		Purchased	No	270	Each	2,151.000	6	6

Location		Loc Qty	Loc Code
ST350		2151	
	117313	2	
	117688	36	
	117795	1	
	117872	22	
	118012	20	
	118112	40	
	118451	1000	
	118628	530	
	118706	500	X6

AN3C5A Bolt		Purchased	No	270	Each	1,261.000	4	4

Location		Loc Qty	Loc Code
FP-A		7	
	115835	7	
ST350		1254	
	116419	28	
	116549	30	
	117343	462	
	117764	222	
	117872	12	
	118451	500	X4

AN960C10L washer	NAS1149C0332R	Purchased	No	270	Each	0.0000	10	10

M118354 (x10)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

DART AEROSPACE LTD	Work Order:	73017
Description: Float Skidtube (412)	Part Number:	D3391-3
Inspection Dwg: D3391 Rev: H		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
14.000	+/-0.010	14.00	✓		tape	mmc-02
3.500	+/-0.010	3.500	✓		vern	cnc-08
88.93	+/-0.030	88.9	✓		tape	mmc-02
Ø3.200	+/-0.010	3.200	✓		mic	cnc-05
88.93	+/-0.030	88.9	✓		tape	mmc-02
Ø3.750	+/-0.010	3.750	✓		vern	cnc-08
30° x 160" chamfer	+/-0.010	30x160	✓		vil	"

Measured by:	mmc	Date:	11/09/1
Audited by:	[illegible]	Date:	11.9.13

HAAS Section						
1.526	+0.000/-0.030	1.510	✓		Vern	GA-01
7.500	+/-0.010	7.500	✓		Vern	CNC-02
27.750	+/-0.010	27.750	✓		TAPE	GA-12
31.750	+/-0.010	31.850			"	"
35.250	+/-0.010	35.250	✓		"	"
3.300	+/-0.010	3.304	✓		Vern	GA-01
0.200	+/-0.010	0.201	✓		"	"
3.520	+/-0.010	3.523	✓		Mic	GA-10
0.687	+0.010/-0.000	0.690	✓		Vern	GA-01
R0.062	+/-0.010	R0.032	✓		R-G	ref.
Ø0.484	+0.005/-0.001	ϕ 0.488	✓		Vern	GA-01

Measured by:	SL	Date:	11-09-19
Audited by:		Date:	

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	
H	11.06.21	Dimension 44.995 removed	KJ	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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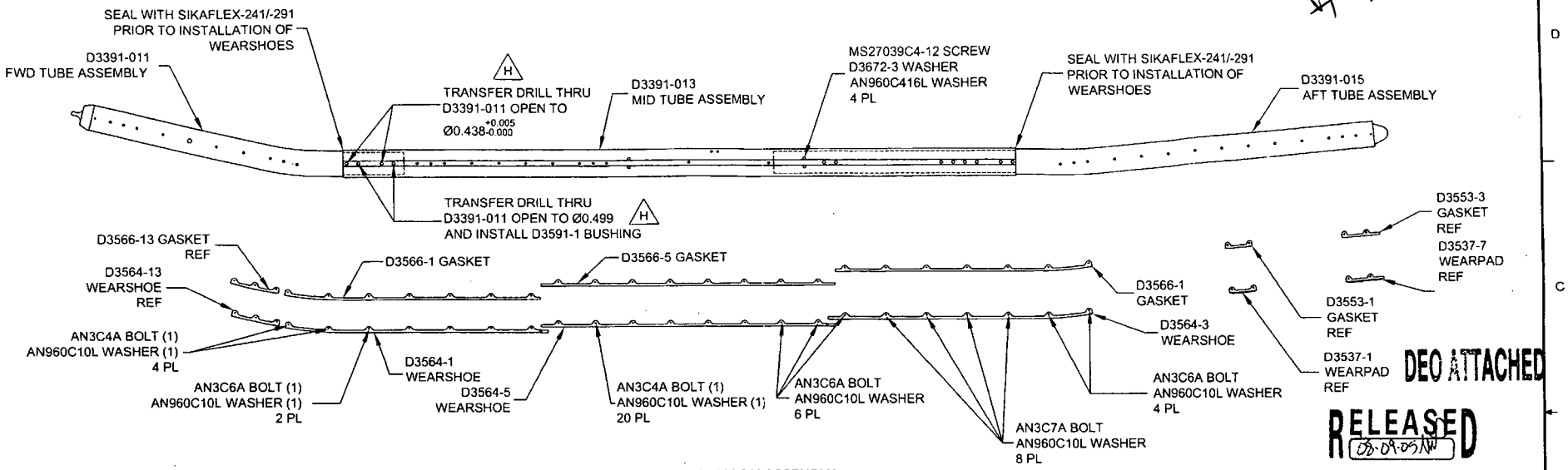
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\FORMS\Quality Assurance\approved QA\NCRWO RevE

#73017



DEO ATTACHED

RELEASED 08-09-05 NW

D3391-041 ASSEMBLY

REV.	DESCRIPTION	BY	DATE
H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07

D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY -041	PART NUMBER	DESCRIPTION
X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-3	WEARSHOE
1	D3564-5	WEARSHOE
2	D3566-1	GASKET
1	D3566-5	GASKET
2	D3591-1	BUSHING
4	D3672-3	WASHER
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

GENERAL NOTES

1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.

DESIGN	PH	**DART AEROSPACE USA, INC** PORT HADLOCK, WA
DRAWN	AJS	
CHECKED		DRAWING NO. D3391 — REV. H — SHEET 1 OF 8
MFG. APPR.		
APPROVED		TITLE: 412 FLOAT SKIDTUBE — SCALE: NTS
DE APPR.		
DATE	08.08.20	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

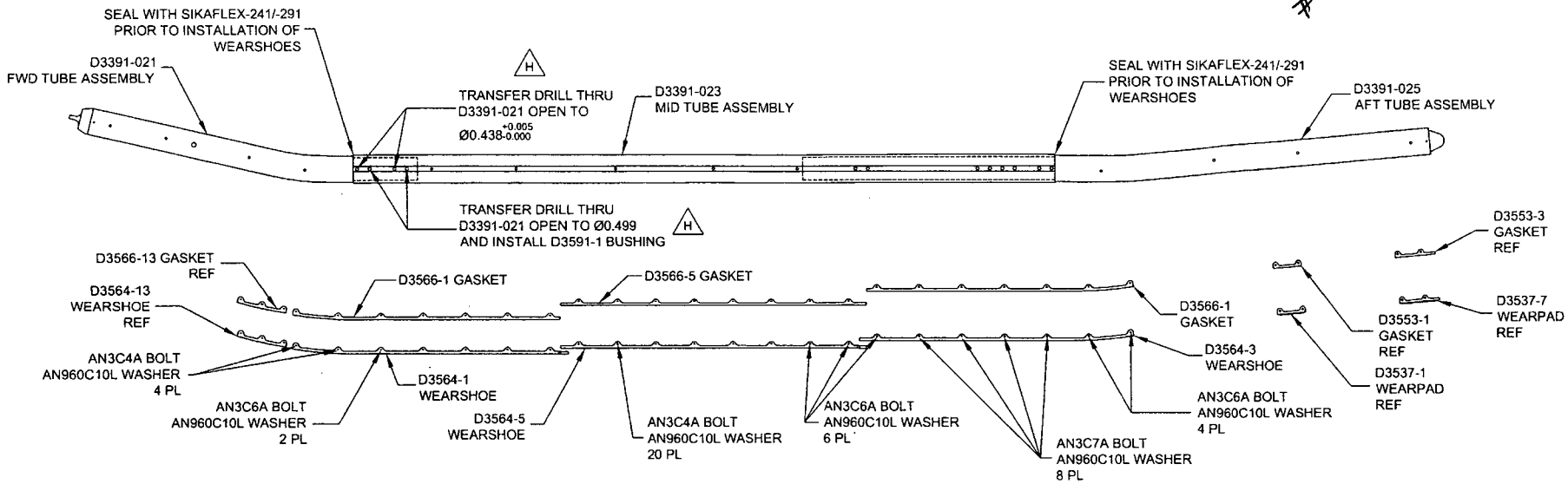
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

#73017



D3391-043 ASSEMBLY

D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY -043	PART NUMBER	DESCRIPTION
X	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-3	WEARSHOE
1	D3564-5	WEARSHOE
2	D3566-1	GASKET
1	D3566-5	GASKET
2	D3591-1	BUSHING
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER

H

GENERAL NOTES

1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.

DEO ATTACHED

RELEASED 08.09.05

DESIGN	PH	DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 2 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20		

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

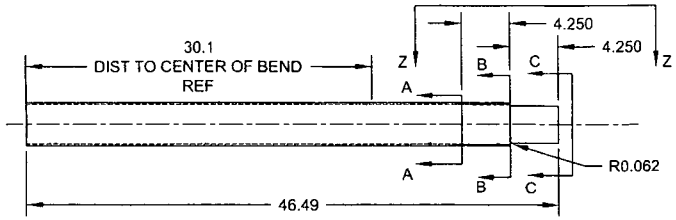
Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

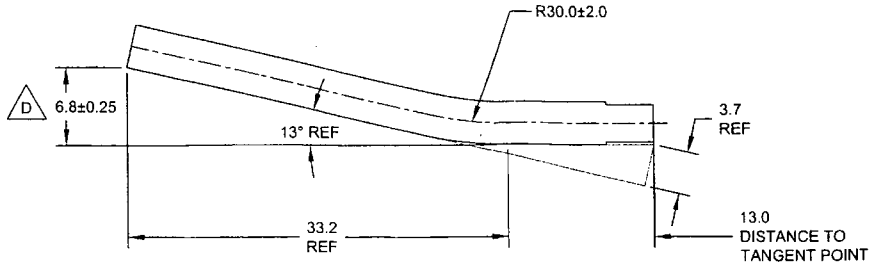
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

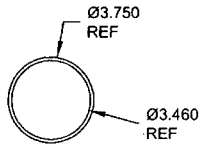
H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE



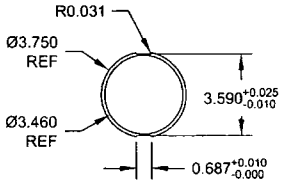
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



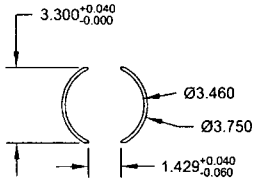
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



SECTION A-A
SCALE 2X

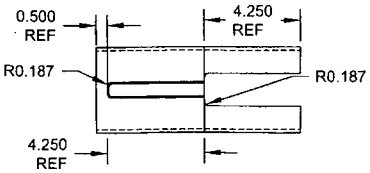


SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X

73017



VIEW Z-Z
SCALE 2X

DEO ATTACHED

RELEASED
08-19-05 NW

DESIGN	PH	DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 3 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20		

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

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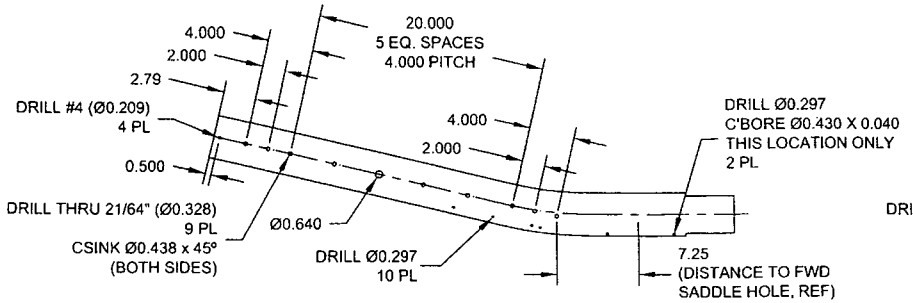
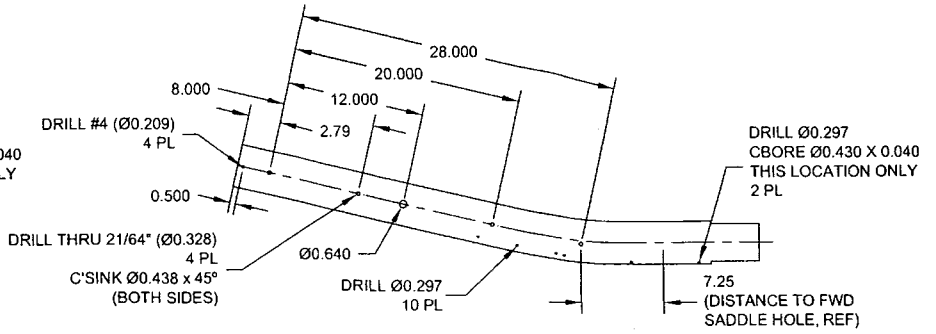
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

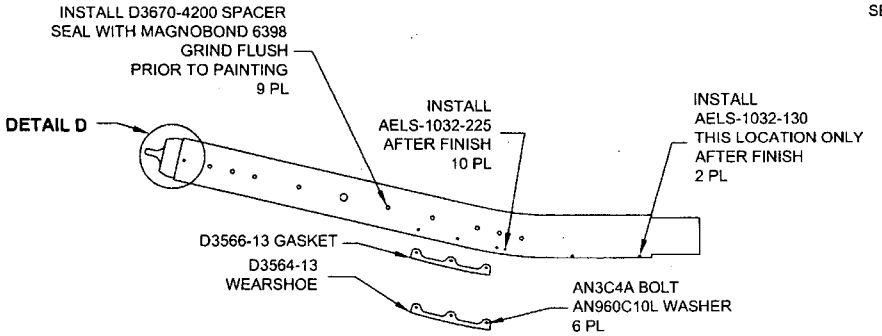
H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE



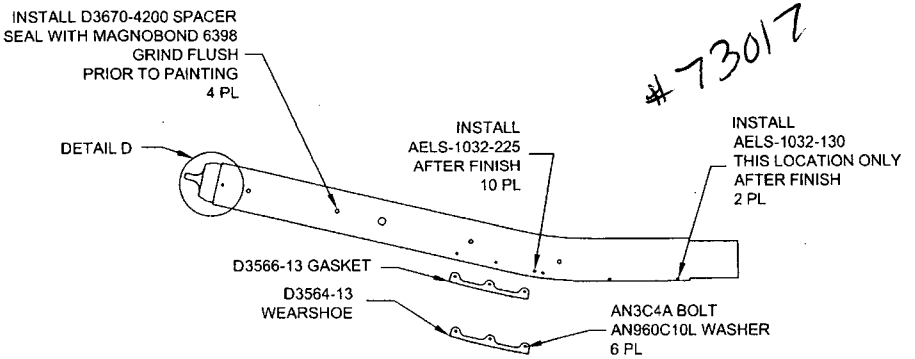
D3391-011 DRILLING DETAIL



D3391-021 DRILLING DETAIL

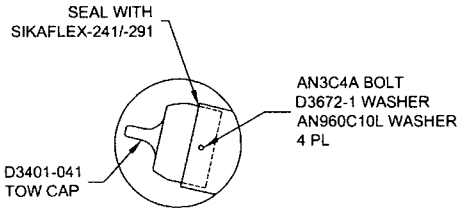


D3391-011 ASSEMBLY DETAIL



D3391-021 ASSEMBLY DETAIL

#73017



DETAIL D
SCALE 2X

D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X		D3391-011	FWD TUBE ASSEMBLY
	X	D3391-021	FWD TUBE ASSEMBLY
1	1	D6013-047	FWD TUBE
1	1	D3401-041	TOW CAP
1	1	D3564-13	WEARSHOE
1	1	D3566-13	GASKET
9	4	D3670-4200	SPACER
4	4	D3672-1	WASHER
10	10	AN3C4A	BOLT
10	10	AN960C10L	WASHER
2	2	AELS-1032-130	INSERT
10	10	AELS-1032-225	INSERT

DEO ATTACHED

RELEASED 08-09-20 MW

DESIGN	PH	**DART AEROSPACE USA, INC** PORT HADLOCK, WA
DRAWN	AJS	
CHECKED		DRAWING NO. D3391 — REV. H — SHEET 4 OF 8
MFG. APPR.		
APPROVED		TITLE: 412 FLOAT SKIDTUBE — SCALE: NTS
DE APPR.		
DATE	08.08.20	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

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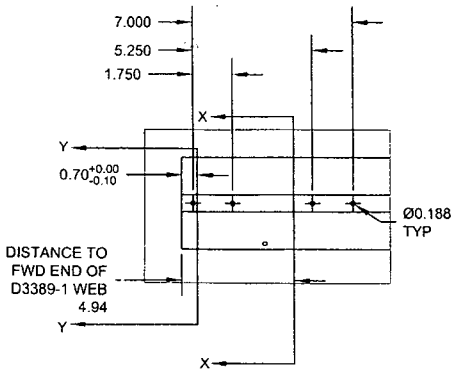
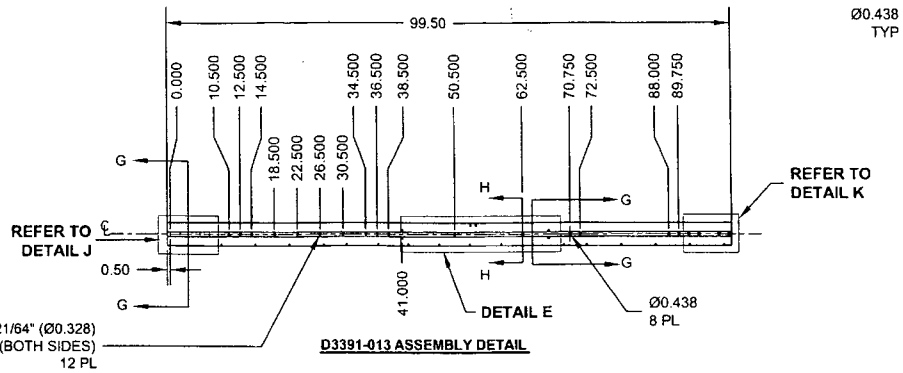
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

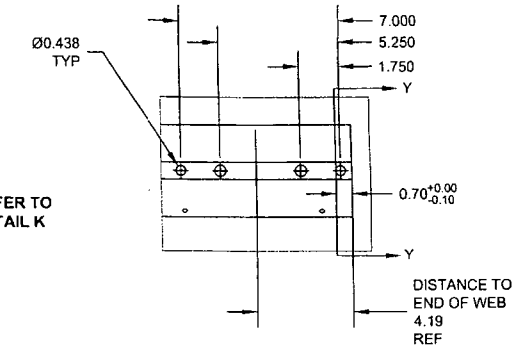
H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE



DETAIL J
SCALE 4X

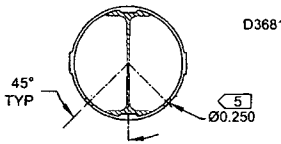


D3391-013 ASSEMBLY DETAIL



DETAIL K
SCALE 4X

#7307



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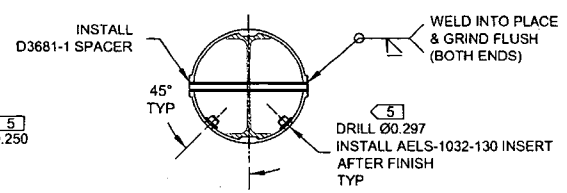
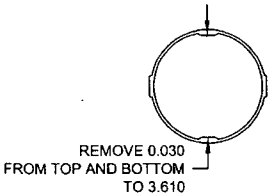
SCALE 5X



SECTION H-H 12 PL
SCALE 5X



SECTION X-X
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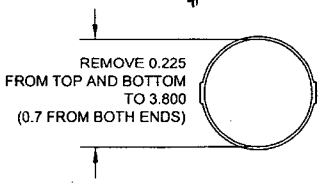
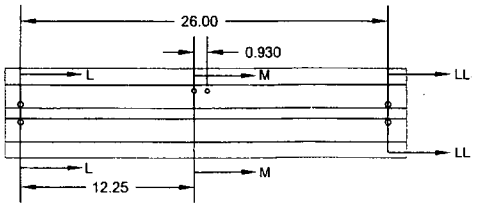
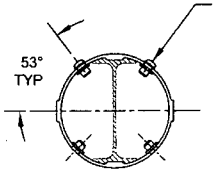


SECTION Y-Y
SCALE 5X

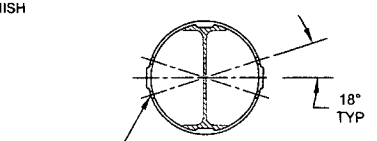


DETAIL E
SCALE NONE



DRILL Ø0.297
INSTALL AELS-1032-130 INSERT
MS27039C1-09 SCREW
D3672-1 WASHER
AN960C10L WASHER
AFTER FINISH
4 PL

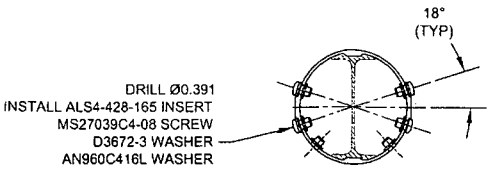
SECTION M-M
SCALE 5X



SECTION LL-LL
SCALE 5X

D3391-013 MID TUBE ASSEMBLY PARTS LIST

QTY -013	PART NUMBER	DESCRIPTION
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW



SECTION L-L
SCALE 5X

D3391-013 MID TUBE ASSEMBLY

1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
3) WELDING: PER DART QSI 004

DEO ATTACHED

RELEASED 08-04-20

DESIGN	PH	**DART AEROSPACE USA, INC** PORT HADLOCK, WA
DRAWN	AJS	
CHECKED		DRAWING NO. D3391 — REV. H — SHEET 5 OF 8
MFG. APPR.		
APPROVED		TITLE: 412 FLOAT SKIDTUBE — SCALE: NTS
DE APPR.		
DATE	08.08.20	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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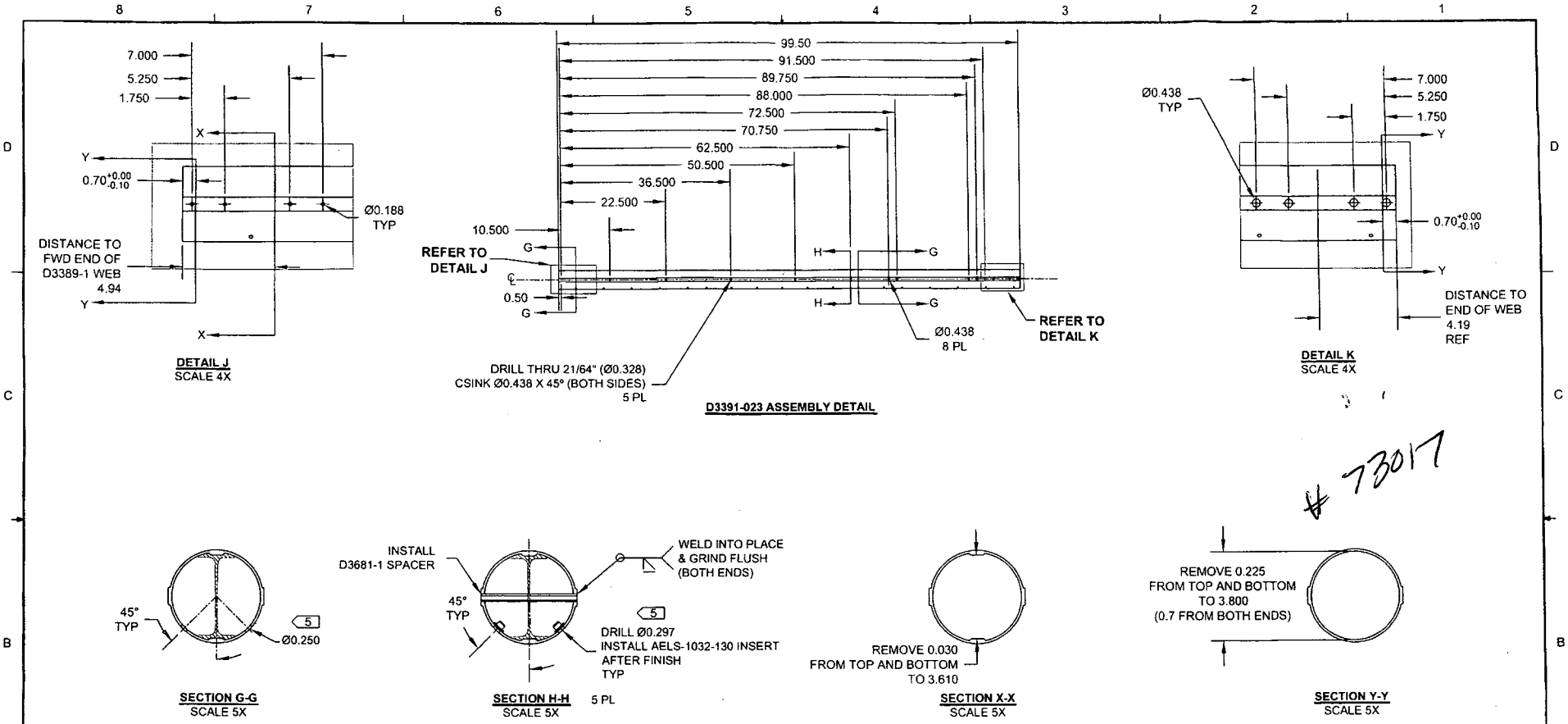

73017

DEO ATTACHED

RELEASED 08-07-25 JW

D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
3) WELDING: PER DART QSI 004

DESIGN	PH	DART AEROSPACE USA, INC PORT HADLOCK, WA
DRAWN	AJS	
CHECKED		DRAWING NO. REV. H
MFG. APPR.		D3391 SHEET 6 OF 8
APPROVED		TITLE SCALE
DE APPR.		412 FLOAT SKIDTUBE NTS
DATE	08.08.20	

Dart Aerospace Ltd

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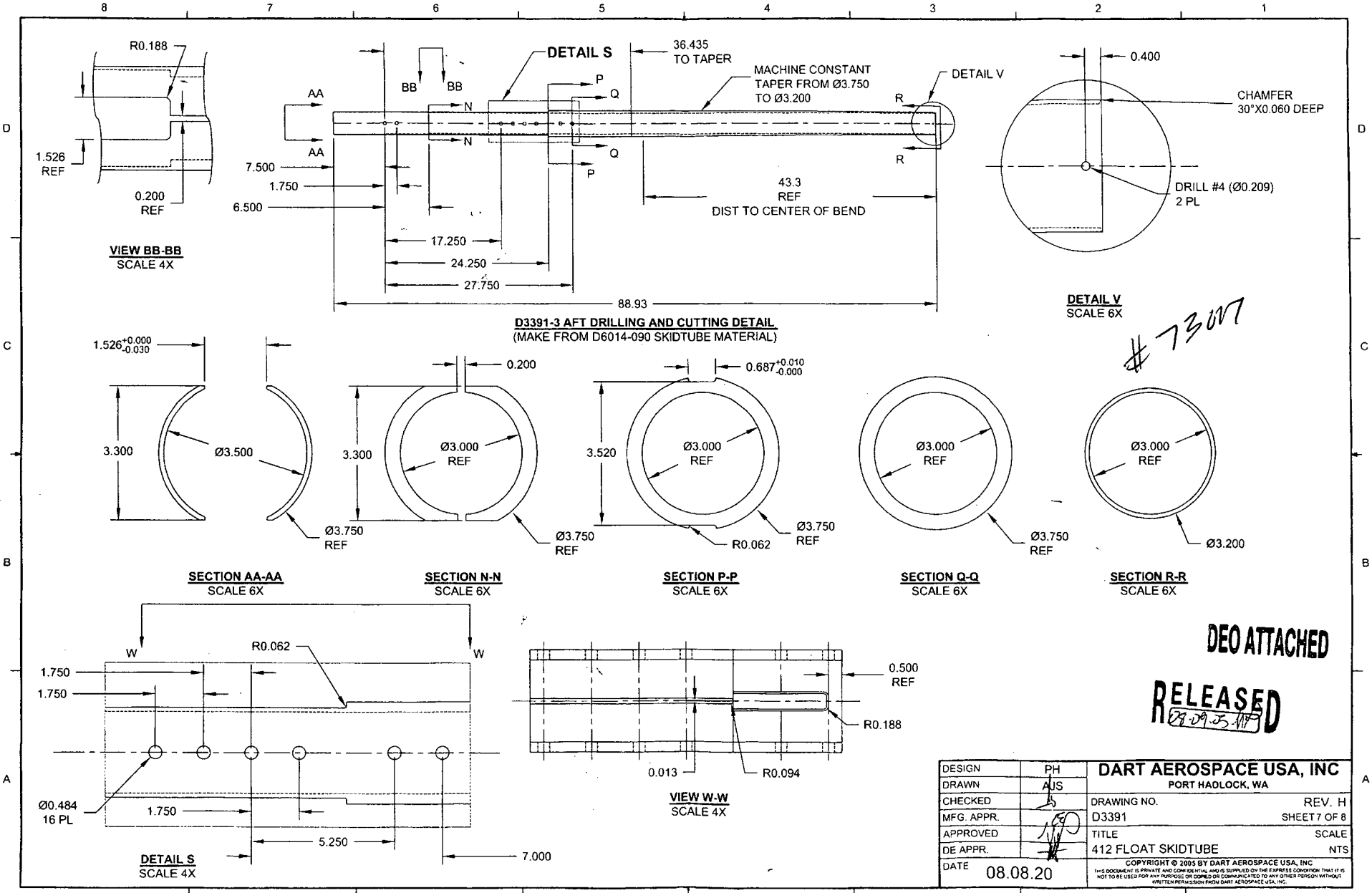
R0.188
1.526 REF
0.200 REF
VIEW BB-BB
SCALE 4X
DETAIL S
36.435 TO TAPER
MACHINE CONSTANT TAPER FROM Ø3.750 TO Ø3.200
DETAIL V
AA
BB
N
P
Q
R
7.500
1.750
6.500
17.250
24.250
27.750
88.93
43.3 REF DIST TO CENTER OF BEND
D3391-3 AFT DRILLING AND CUTTING DETAIL
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)
0.400
CHAMFER 30°X0.060 DEEP
DRILL #4 (Ø0.209) 2 PL
DETAIL V
SCALE 6X
#73017
1.526 +0.000 -0.030
3.300
Ø3.500
Ø3.750 REF
0.200
Ø3.000 REF
0.687 +0.010 -0.000
3.520
R0.062
SECTION AA-AA
SCALE 6X
SECTION N-N
SCALE 6X
SECTION P-P
SCALE 6X
SECTION Q-Q
SCALE 6X
SECTION R-R
SCALE 6X
W
R0.062
1.750
Ø0.484 16 PL
5.250
7.000
DETAIL S
SCALE 4X
0.500 REF
R0.188
0.013
R0.094
VIEW W-W
SCALE 4X
DEO ATTACHED
RELEASED
08-09-25-17
DESIGN PH
DRAWN AJS
CHECKED
MFG. APPR.
APPROVED
DE APPR.
DATE 08.08.20
DART AEROSPACE USA, INC
PORT HADLOCK, WA
DRAWING NO. D3391
REV. H
SHEET 7 OF 8
TITLE 412 FLOAT SKIDTUBE
SCALE NTS
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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

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NOTE: Date & initial all entries

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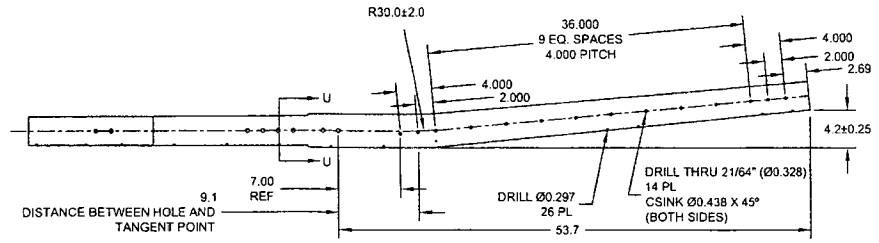
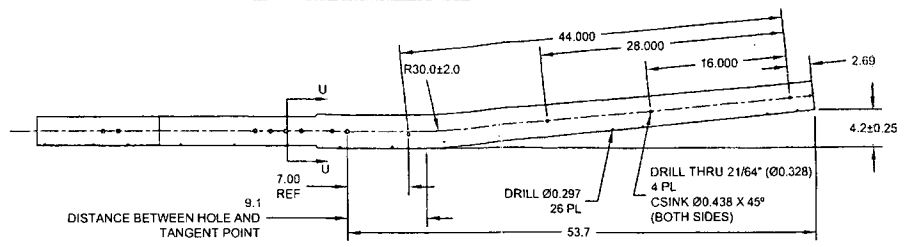
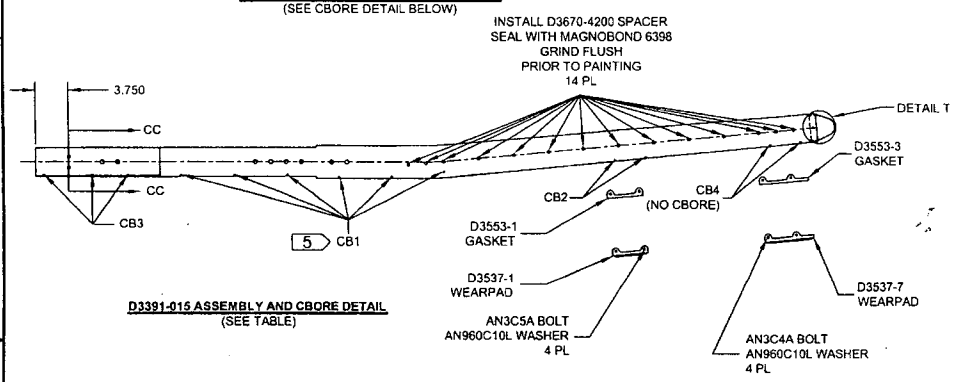


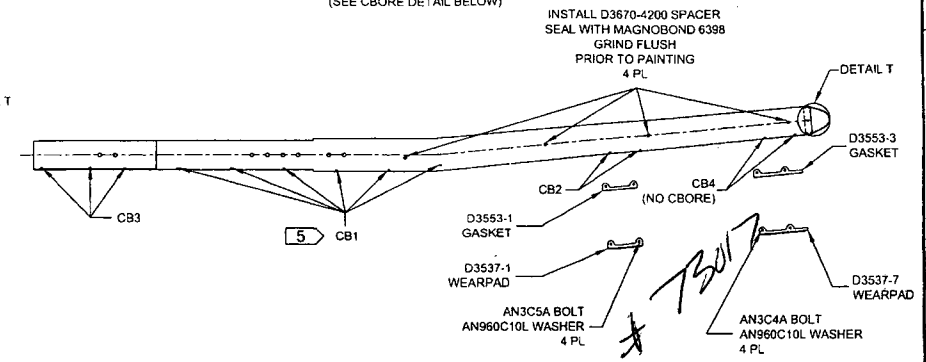
D3391-015 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)



D3391-025 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)



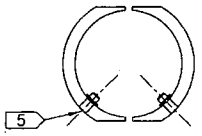
D3391-015 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)



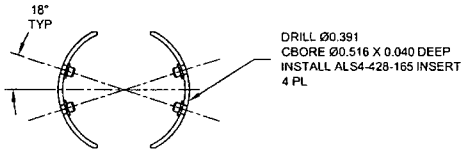
D3391-025 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)

D3391-015/-025 AFT TUBE ASSEMBLY PARTS LIST

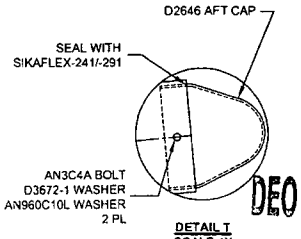
QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X		D3391-015	AFT TUBE ASSEMBLY
	X	D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
1	1	D3537-1	WEARPAD
1	1	D3537-7	WEARPAD
1	1	D3553-1	GASKET
1	1	D3553-3	GASKET
14	4	D3670-4200	SPACER
2	2	D3672-1	WASHER
14	14	AELS-1032-130	INSERT
12	12	AELS-1032-225	INSERT
4		ALS4-428-165	INSERT
6	6	AN3C4A	BOLT
4	4	AN3C5A	BOLT
10	10	AN960C10L	WASHER



SECTION U-U
SCALE 3X



SECTION CC-CC
SCALE 3X



DETAIL T
SCALE 4X

DEO ATTACHED

RELEASED
08-09-05

C'BORE HOLES MARKED CB1-CB4 AS FOLLOWS AND
INSTALL AELS-1032-XXX AFTER FINISH AS NOTED

HOLES MARKED	QTY D3391-015	QTY D3391-025	CBORE	P/N
CB1	12	12	Ø0.430 X 0.170	AELS-1032-225
CB2	4	4	Ø0.430 X 0.170	AELS-1032-130
CB3	6	6	Ø0.430 X 0.040	AELS-1032-130
CB4	4	4	NONE	AELS-1032-130

DESIGN	PH	**DART AEROSPACE USA, INC** PORT HADLOCK, WA
DRAWN	AJS	
CHECKED		DRAWING NO. REV. H
MFG. APPR.		D3391 SHEET 8 OF 8
APPROVED		TITLE SCALE
DE APPR.		412 FLOAT SKIDTUBE NTS
DATE	08.08.20	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

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NOTE: Date & initial all entries

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DRAWING NO.	TITLE	REV. H	DART AEROSPACE USA, INC ENGINEERING ORDER	D.E.O. NO.	SHEET NO.	SCALE
D3391	412 FLOAT SKIDTUBE			D3391-H-1	SHEET 1 OF 1	NTS

DRAWN	CHECKED	MFG. APPR.	APPROVED	DE APPR.
DATE 09.09.23	DATE 09.09.24	DATE 09/09/25	DATE 09/09/30	DATE 09/09/30

PURPOSE:
LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

RELEASED
2010 -02- 02

CHANGE:
AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.~~ COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

78017

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

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NOTE: Date & initial all entries

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Chris Provencal

From: David Shepherd <dshepherd@dartaero.com>
Sent: Friday, September 16, 2011 11:23 AM
To: 'Chris Provencal'
Cc: 'Mike Petsche'
Subject: RE: NCR D3391-025

Chris,

I agree that the deviation is acceptable for the reasons that you have pointed out below.

David

From: Chris Provencal [mailto:cprovencal@dartaero.com]
Sent: September-16-11 7:27 AM
To: David Shepherd
Cc: Mike Petsche
Subject: NCR D3391-025

David,

Qty (1) D3391-025 Aft Tube Assembly.

The attached pictures show both sides of the tube. The slots for the I-beam are correct, but the flat on one side extends 0.1" further. On the positive side, the transition radius on that side is 1/8" instead of 1/16".

The M.S. on the tube from the test is 0.006, so I can't really justify the deviation by calculation. But based on the fact that this wasn't the critical area during the test, and the larger radius helps reduce stress concentrations in the area, that it would be acceptable.

-Chris

Mike Petsche

From: Linda Lacelle <llacelle@dartaero.com>
Sent: Thursday, October 27, 2011 5:06 PM
To: 'Mike Petsche'; dshepherd@dartaero.com
Subject: FW: NEW PO 12248 FOR BRISTOW US LLC - CP/SH

fyi

From: Shirley Hay [mailto:SHay@darths.com]
Sent: October-27-11 3:55 PM
To: Linda Lacelle; Nancy MacLeod; sbedford@dartaero.com; mfauteux@dartaero.com; 'Brigitte Golden'; rmolnar@dartaero.com
Cc: Linda Pilon; Carole O'Rourke; Carrie Pearson
Subject: RE: NEW PO 12248 FOR BRISTOW US LLC - CP/SH

Hello

Please send out the old configuration

Regards
Shirley Hay

From: Linda Lacelle [mailto:llacelle@dartaero.com]
Sent: Wednesday, October 26, 2011 3:34 PM
To: Nancy MacLeod; sbedford@dartaero.com; mfauteux@dartaero.com; 'Brigitte Golden'; rmolnar@dartaero.com
Cc: Linda Pilon; Shirley Hay; Carole O'Rourke; Carrie Pearson
Subject: RE: NEW PO 12248 FOR BRISTOW US LLC - CP/SH

There has been a recent engineering change on the float skids, and the earliest we can ship these would be the week Nov. 7th, or we ship the current CHG number with the old configuartion of wearplates...please let mw know how you would like to proceed.
Linda

From: Nancy MacLeod [mailto:NMacLeod@darths.com]
Sent: October-20-11 1:56 PM
To: 'sbedford@dartaero.com'; 'llacelle@dartaero.com'; 'mfauteux@dartaero.com'; Brigitte Golden; rmolnar@dartaero.com
Cc: Linda Pilon; Shirley Hay; Carole O'Rourke; Carrie Pearson
Subject: NEW PO 12248 FOR BRISTOW US LLC - CP/SH

Please see the attached PO for Bristow US LLC.

If you require any further information, please let me know. Thank you,